SUMMARY OF PLASTIC

INDEX

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	MALIGNANT MELANOMA	BASAL CC	SQUAMOUS CC
ORIGIN	Melanocytes at the dermo-epidrmal j. "+ve DOPA"	Basal cells of the epidermis	Prickle cell layer
%	Less common	M/C non-invasive skin malignancy	2^{nd} M/C & the 1^{st} M/C invasive tumor
PDF	1) **Junctional & compound naevi.** 2) **Giant hairy mole.** 3) **<u>Benign mole if:</u>** • Incomplete surgical excision. • Chronic mech. irritation. 4) **Hutchinson's frickles.** + PDF of BCC	1) Sun light. (UV rays) 2) Albinism & Xeroderma pigmentosa. (AR) 3) Bowen's disease. 4) Seborrheic Keratosis. 5) TB of skin. (lupus vulgaris) 6) Arsenic industries.	
SITE	• At any site. • **Special sites**: sub-lingual, eyes & anal canal.	90 % **Face** → **area** above a line from angle of mouth to lobule of ear.	• Areas exposed to sun-light. • Lips, Esoph., Tongue, Anal canal, UB.
MAC.	**<u>5 Clinical types</u>** (see below)	**<u>Nodulo-Ulcerative (M/C) → Rodent ulcer</u>** ✓ **<u>Edge:</u>** rolled in – **beaded.** (dt fibrosis) ✓ **<u>Floor:</u>** irregular necrotic. ✓ **<u>Base:</u>** Fixed – indurated. ✓ **<u>Margin:</u>** congested – hyperemic.	**<u>Nodulo-ulcerative → SCC Ulcer:</u>** • **<u>Edge</u>**: raised – everted. • **<u>Floor</u>**: irreg. necrotic. • **<u>Base</u>**: indurated. } *Rapidly growing hard nodules that soon ulcerates* • **<u>Margin:</u>** congested – hyperemic.
MIC.	Spindle cells + **<u>STAGING:</u> CLARCK-MCGOVERN & BRESLOW** **I** → epidermis. **II** → papillary dermis. **III** → J. bet papillary & reticular **IV** → reticular dermis. **V** → SC fat.	• Masses of Malignant cells. • Central polyhedral cells → **no cell nest** • Peripheral columnar cells in **<u>Palisade</u>**	• Masses of Malignant cells. • Central → **CELL NESTs of Keratin.** • Peripheral squamous. "epitheliod"
SPREAD	Early by **<u>All routes</u> specially Lymphatic** → embolization & PERMEATION →Satellites (transit metastasis)	LOCALLY MALIGNANT	**Direct & Lymphatic** & rarely blood (embolization only)
C/P	1) F > M. 2) **5 Clinical types. (see below)** 3) **<u>Mole with ABCDE changes.</u>**	• **Male > 40 ys.** • **<u>Slowly</u>** growing Nodule → ulcer. (late) • **LN** → not ++ *(except 2^{ry} inf. / malig. transform)* • Clinical types. (see below) • **<u>Complications:</u>** *Sever hge dt infiltration of lingual a. Malig. transform. / 2^{ry} inf. → CST*	• **Male > 50 ys.** • **<u>Rapidly</u>** growing Nodule → ulcerates. • **LN ++** → early mobile / late fixed.

	Malignant Melanoma	**Basal CC**	**Squamous CC**
Invest.	• Excisional Biopsy. **(3 mm SM)** • For metastasis → CT scan / US / CXR.	Excisional Biopsy + CT	The same

Malignant Melanoma – Treatment

1) **Wide local Excision + SM acc. to Breslow then Repair.**
   - **< 1mm** → **95** % SR → **1 cm** SM.
   - **1-2 mm** → **75** % SR → **2 cm**
   - **>2-4 mm** → **50** % SR → **3 cm**
   - **>4 mm** → **< 50** % SR → **3 cm**

2) **LN** If –ve → follow up.
   If +ve → block dissection.

3) **If Recurrent** → **Intra-arterial Chemo.** "Melphalan"

4) **Dx. metastasis** → Systemic chemo "Dacarbazin" / Immunoth. IL-2

NB: Melanoma is Highly Radio-resistant

Basal CC / Squamous CC – Treatment

- **1^{ry} lesion**
  - **Surgery vs. Radiotherapy**
    - Excision + SM (0.5 to 1 cm)
    - Small. (<1 cm)
    - Bone infiltration.
    - Recurrence or resistance to radio.
    - Near eye.
  - **Recently for small lesions**
    - Cryosurgery.
    - Topical 5 FU.
    - Mohs' µ graphic surgery.
- **LN in SCC**
  - **If No LN++** → follow up ± Sentinal biopsy
  - **If LN ++**
    - **if close to tumor** → excised with 1^{ry} lesion in 1 block.
    - **if away from tumor** → BND later on (after 2 wks) *to give time for any residual malig. emboli to reach the LN.*

5 Clinical types of Malig. Melanoma

	Superf. spreading	**Nodular**	**Lantigo Maligna**	**Acral-lentiginous**	**Amelanotic**
%	70 %(M/C)	15-20%	10 %	2-8%	<5%
Age	Middle age	Young age	Old age		
Site	Male → trunk female →LL	Trunk & LL	Face → early seek for TTT	Sole, palm, subungual (hidden) → late TTT	
Path.	• Black. • Flat / irreg. • Slightly raised.	• Brown to black. • Smooth surface. • Ulceration.	• Brown macule. • On top of Hutchinson's fr.		• Pink. (no melanin) • Undiff.(anaplastic • -ve DOPA test.
Growth	Radial	Vertical	Radial v. slowly	Vertical & radial	
Prognosis	Intermediate	Poor	THE BEST "may regress!	Poor	THE WORST

Other Cl. types of BCC:

1) *Cystic.*
2) *Superf. /multi-centric → mimic psoriasis or eczema dt arsenic exposure.*
3) *Infiltrative = Iceberg. (DD with SCC)*
4) *Sclerosing = Cicatricial → (Shiny smooth surf. + Telangectesia)*
5) *Pigmented → DD with melanoma*
6) *Polypoid.*
7) *Aberrant → abnormal sites.*

PIGMENTED NAEVI (MOLES)

1) **Superficial** → in the epidermis → **never turn** malignant.
2) **Intradermal** → in the dermis → **never turn** malignant.
3) **Junctional** → **bet**. Dermis & epidermis → may turn malig.
4) **Compound** → in **both** → may turn malig.

INDICATIONS FOR EXCISION:

1. **DISFIGURING.**
2. **SIGNS OF MALIGNANCY? MOLE WITH ABC CHANGES:**
    - **A**symmetry.
    - **B**orders → irregular / ill-defined.
    - **C**olor changes / **C**onsistency → hard.
    - **D**iameter ↑ / **D**raining LN ++
    - **E**levation.
    - **F**issuring, ulceration or bleeding.
    - **Other warning signs:**
        a) **Site** → of repeated irritation
        b) **Shape** → satellites.
        c) **GIANT HAIRY MOLE.**

BED SORES

1) **Etiology** → unrelieved pressure.
2) **Sites** → sacrum, ischial tuberosity, trochanteric.
3) **Prevention** → frequent turning of the patient every 2hrs. (most imp.)
4) **for repair** → FLAP (never graft)
5) **GRADING OF "SHEHA":**

- 1^{st} → **Non - blanchable erythema.**
- 2^{nd} → Blister. (partial thickness → epidermis + part of or all dermis)
- 2^{nd} → Full thickness. (epidermis + dermis +SC t. up to the deep fascia)
- 4^{th} → Down to ms., bone. (Ulcer with undermind edge + painless)

XERODERMA PIGMENTOSA (AR)

- **AR.**
- **Mutation in "NER"** Nucleotide Excision Repair → un able to repair damaged tissues caused by UV rays.
- Multiple BCC & other skin malig. at young age.

CANCER TONGUE

ETIOLOGY

1) **CHRONIC IRRITATION. (M/C)** by Sharp tooth → Dental ulcer.
2) **S** → Smoking, Spirits, Spicy food
3) **LEUKOPLAKIA - PAPILOOMA. (HPV)**

CANCER LIP = TONGUE EXCEPT

- ***Etiology*** → 3S + *smoking pipe.*
- ***Site*** → *lower lip.* (j. bet med. 2/3 & lat. 1/3)
- ***Mac & Mic*** → as SCC.
- ***Spread*** → *Late* to LNs (upper deep cx.) → no need for proph. BND.
- ***TTT.***
  - **a)** If no LNs ++ → *no proph. BND.*
  - **b)** If LNs ++ → *only supra-hyoid BND.*

Path.

SAME AS SCC, BUT….

1) **SITE** → lateral margin. (M/C)
2) **MAC & MIC**
2) **SPREAD** → Direct to mandible. (Early)
   → Lymphatic (early):
   - *lateral margin → sub-mandibular.*
   - *Tip → sub-mental.*
   - *post 1/3 (worst) → upper deep Cx.*

EVENTUALLY, ALL DRAIN THE LOWER DEEP CX. LN.

C/P

DD of Tongue Ulcers

Male > 50 ys "early symptoms

Persistant Ulcer as SCC

- Pain → radiating to ear via Ch. tympani or Auriculo-temp. n.
- ↑ Salivation.
- Dysphagia & difficulty in speaking.
- Draining LN++ & Ankyloglossia.

COD IN CANCER TONGUE:

1) *Cancer Cachexia.*
2) *Asp. Pneumonia. (dt salivation)*
3) *Fatal hge. (lingual a.)*
4) *Asphyxia. (post. 1/3)*

INVEST.

- Excisional Biopsy
- CT neck & mandible
- FNC if LN++.

TREATMENT

SURGERY VS. RADIO

SURGERY IF

- Small. (<1cm)
- Bone infiltration.
- Recurrent or resistant to Radio-th.

- In situ → wide local excision + SM 1 cm
- Tip → partial glossectomy
- lateral → hemi-glossectomy.
- post 1/3 → Total glossectomy.
- Infilteration of mandible → ***Commando op.?!***

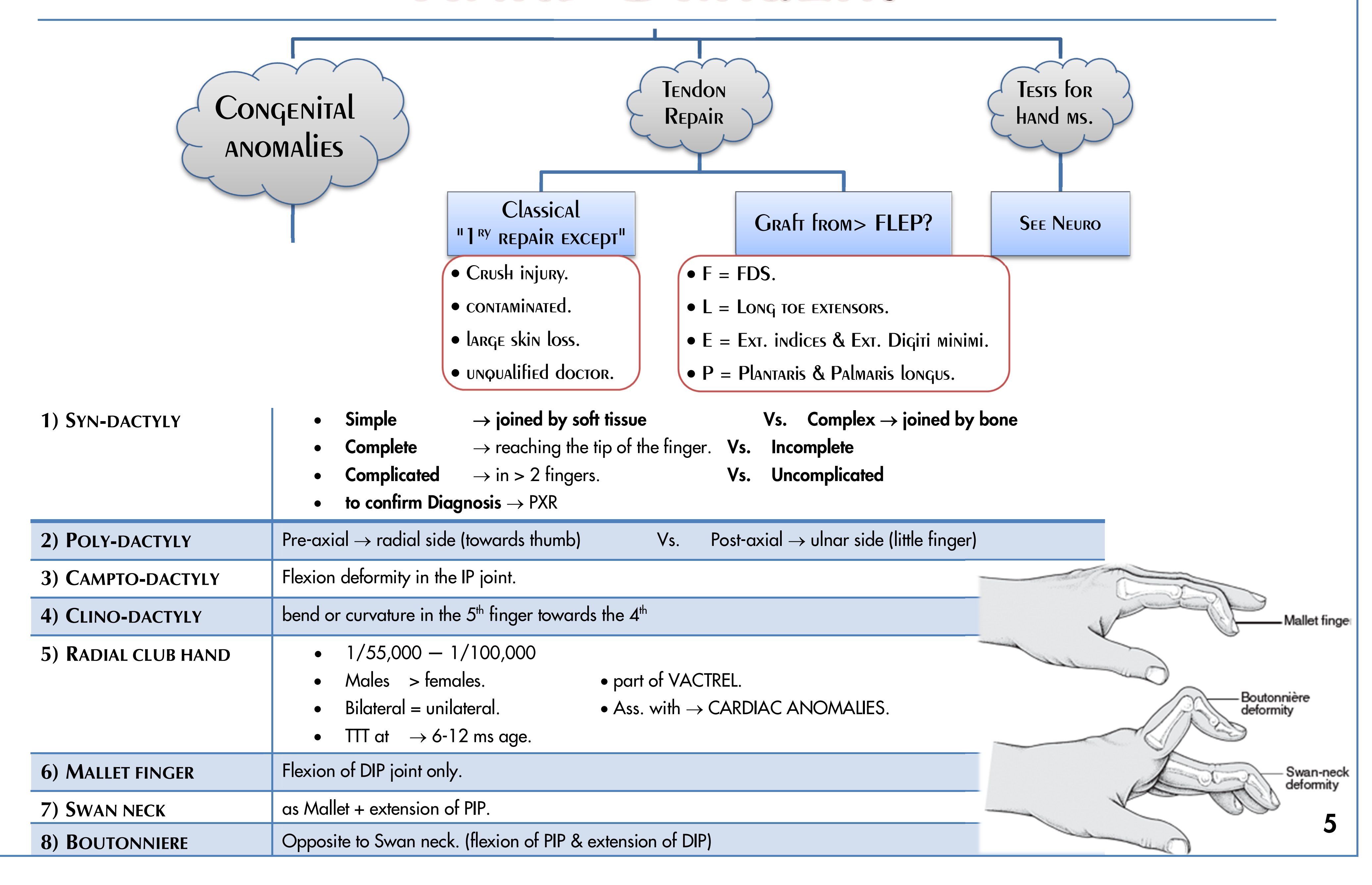
LN

Modified BND whether infilterated or not!"

↓

"preserves the IJV for brain drainage

Hand Surgery



Congenital anomalies

Tendon Repair

Classical "1ry repair except"

- Crush injury.
- contaminated.
- large skin loss.
- unqualified doctor.

Graft from> FLEP?

- F = FDS.
- L = Long toe extensors.
- E = Ext. indices & Ext. Digiti minimi.
- P = Plantaris & Palmaris longus.

Tests for hand ms.

See Neuro

1) Syn-dactyly	• **Simple** → **joined by soft tissue** Vs. **Complex** → **joined by bone** • **Complete** → reaching the tip of the finger. **Vs.** **Incomplete** • **Complicated** → in > 2 fingers. **Vs.** **Uncomplicated** • **to confirm Diagnosis** → PXR
2) Poly-dactyly	Pre-axial → radial side (towards thumb) Vs. Post-axial → ulnar side (little finger)
3) Campto-dactyly	Flexion deformity in the IP joint.
4) Clino-dactyly	bend or curvature in the 5th finger towards the 4th
5) Radial club hand	• 1/55,000 — 1/100,000 • Males > females. • Bilateral = unilateral. • TTT at → 6-12 ms age. • part of VACTREL. • Ass. with → CARDIAC ANOMALIES.
6) Mallet finger	Flexion of DIP joint only.
7) Swan neck	as Mallet + extension of PIP.
8) Boutonniere	Opposite to Swan neck. (flexion of PIP & extension of DIP)

Wound Healing

	Hemostatic stage / inflammation/ preparation /lag phase	Proliferation	Maturation /Remodelling
Duration	2-5 days	1- 4 wks	6ms – 1 year
Pre-dom. cell	• **MQ** → *phagocytosis + debridement + chemotaxis.* • **PNL, platelets.** • **Lymphocytes.**	• Fibroblasts. • Epith. & Endoth.	
Action	Epithilization & the dressing can be removed	Granulation tissue formation	Deposition of collagen III & it's gradually replaced by type I (mature & healthy)
Wound strength	Zero	<10	50-70 %

Complications of Wound Healing

- *Wound failure → **Burst abdomen.*** *(see hernia)*
- *Contracture.*
- ***Hypertrophic scar / Keloid.*** *(excess fibrous tissue)*
- *Stich marks.*
- *Wound infections.*

	Hypertrophic scar	Keloid
Path.	Never extends beyond the boundaries of the wound.	Extending beyond.
Etiology	infection or dehiscence	Unknown ± FH Dark skin – Pregnancy.
Site	Flexor surface.	STERNUM – Ear lobule.
Healing	Spontaneous resolution.	No tendency.
TTT.	Excision **without recurrence** so **no radio is required**	**Recurrence** is common **so Excision + Radio.**

MAXILLO-FACIAL TUMORS

	DENTAL CYST (RADICULAR)	DENTIGEROUS
ORIGIN	Malassez cells. (totipotent of the teeth)	✓
ETIOLOGY	Chronic irritation by a **pulpless infected** tooth.	… by **Unerrupted tooth** (commonly 3rd molar)
AGE	Adults & elderly.	Children & young adults.
SITE	**Upper** jaw.	**Lower** jaw.
PATHOLOGY	Uni-locular, small, painless, slowly growing, **containing Cholesterol crystals**	✓
NEARBY TOOTH	**Pulpless infected.**	**missing.**
TTT	De-roofing, Excision or marsipulization.	✓ +removal of unerrupted tooth

CHOLESTEROL CRYSTALS?

1) *Hydrocele.*
2) *Branchial cyst.*
3) *Dental & dentigerous cysts.*

ADAMANTINOMA

- **Pathologically** → as BCC but radio-resistant.
- **Cl. & Radiologicaly** → as GCT of bone → egg shell crackeling sensation + soap bubble appearance!!!
- **Age** → **Adult females (25 – 45 ys)**

TRAUMATOLOGY

Fall from height, fist blows & motor car accidents.

	Fracture Zygoma	Fracture Maxilla	Fracture mandible
C/P	**ORTHO SCHEME +** • **4 eye signs:** 1) Diplopia. 2) Enophthalmos. (Apparent) 3) Ocular dystocia. 4) Eye ecchymosis & sub-conj. Hge. • **4 Cheek signs:** 1) Depressed. 2) Numbness dt injury of infra-orbital n. 3) Palpable stepping. 4) **Trismus** dt irritation of masseter.	**ORTHO SCHEME +** • **Elongated** mid face. • **Retracted** mid face. • **Mal-occlusion of teeth + ↑ salivation** • Diplopia?? / Trismus. **NB: Le Fort classification:** ✓ **I** → transverse fracture above teeth. ✓ **II** → pyramidal fracture passing through the nasal bones & infra orbital rim. ✓ **III** → Craniofacial disjunction.	**ORTHO SCHEME +** • Teeth Malocclusion → ↑salivation. • **Speech** impairment. • **Anesthesia over the chin** dt injury of infra-alveolar n. • Swelling & hematoma in the floor of the mouth **→ COLEMAN'S SIGN.** • **Bilateral** → tongue is drawn backward impairing the airway **M/C site = Condylar or sub-condylar**
INVEST.	1) **X-Ray** → A-P & ***panoramic view esp. in fracture mandible.*** 2) **CT facial bones.**		

TREATMENT

- **GENERAL**
  1) Air way +Cx. spine Injury.
  2) Th. injury. (flail chest / Cardiac tamponade)
  3) Hge & Shock.
  4) Management of IC injuries.
- **DEFINITIVE**
  - **STABLE**: CR on the 1^{st} day. if delayed → 5^{th} to 6^{th} day.
  - **UNSTABLE**: OR + IF by inter-osseus wiring

HEMANGIOMA & VS. MALFORM.

COMPLICATIONS IN ALL:

- *Ulceration,* ***bleeding*** *& infection.*
- ***In venous malform.***

  Add Thrombosis → DIC

  → Kasabach–Merritt.

	HAEMANGIOMAS	VASCULAR MALFORMATIONS
• ONSET	• Dating or shortly after birth.	• Dating since birth.
• COURSE	• Regressive.	• **Never** regressive. • ↑ in size throughout life in prop. to the body growth.
• TYPES	• STRAWBERRY HAEMANGIOMA. • SALMON PATCH.	• LOW FLOW. (CAPILLARY – VENOUS – LYMPH.) • HIGH FLOW. (PLEXIFORM – ROBERTSON GIANT L.)

	STRAWBERRY HAEMANGIOMA	SALMON PATCH
• SITE	Face.	Forehead & occipital region.
• SURFACE	Raised.	Flat.
• COLOR	Bright scarlet red.	Red Bluish
• COURSE	• Appears → shortly after birth. • Disappears → at 7-8 ys.	• Appears → at birth. • Disappears → 1st yr. of life.
• SPECIAL CCC.	Blanching on compression + Return to (N) on release of pressure.	
• TTT	Conservative as it regress spont. ***unless complicated or lies in the field of vision*** → Squint → **excision.**	

Vs. Malformation

	Low flow			High flow	
	Capillary (Porto-wine)	**Venous (Cavernous)**	**Lymphatic (Cystic hygroma)**	**Plexi-form (Corsoid Aneurysm**	**Robertson's giant limb**
Etiology			Sequestrated part of jagular lymph sac.	Cong. A-V fistula	Multiple A-V fistula affecting 1 limb → local gigantism
Site	Face along the dist. of V n.but never crosses the midline.	1) Lips – Cheeks – Tongue, 2) <u>**Viscera →**</u> <u>**Liver**</u>, kidney. • ***Asymptomatic.*** • *Invest.=US. / Excision if large.*	• **Root / lower part of neck.** • **Post. triangle.** • **Superf. to Sterno-mastoid.** • **Mainly left.**	Temporal "Fore head" (in relation to superf. temporal artery)	Lower limb
Surface	• Flat.	• Bluish. (venous)	• Lobulated / Lax cystic.	• Compressible. • Pulsating. • Thrill. • Bruit.	
Color	• Bluish red!	• Elevated – lobulated.	• Brilliantly translucent		
Course	Scheme (Dating since birth - Not regressive – ↑ size prop. To body gr.)				
Special ccc.	Blanching on compression & return to (N) on release of pr.		Partially Compressible dt shift of lymph to deeps cysts.		
C/P & comp.		The same as before	• Presenting since birth. • ± Obstructed labor. • interfere with resp.	<u>**± IC connection →**</u> • **PXR** → rarified bone dt erosions. • Angiography.	• Gigantism of ! affected limb. • Pulsatile VVs. • Hyper-dynamic circ. → high COP failure.
TTT	• Very difficult. • LASER.	Excision after inj. of Sclerosing mat. as hypertonic saline	Excision immediately after inj. of Sclerosing mat. (OK-432)	• Pre-op emb. of ! feeding vs. • Excision under hypotensive anasth.	Nothing

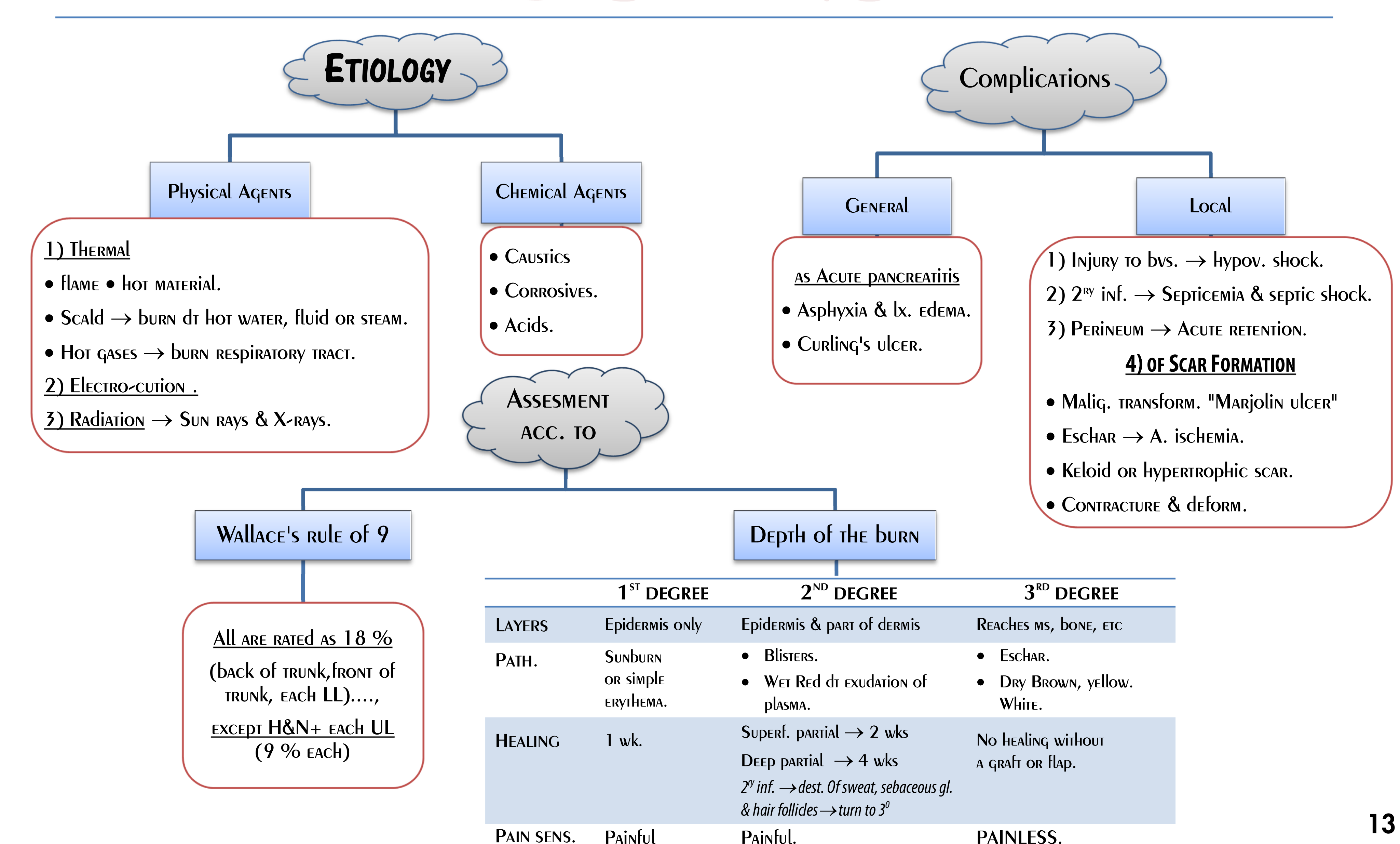
	Hypospadias	Epispadias
Def.	Cong. Anomaly of the urethra where it opens on the **ventral** (under) surface of penis.	Incomplete development of the infra-umbilical part of the Ant. abd. wall + Ant. wall of UB.
Incidence	1/300 live male birth.	1/50,000
Etiology	Failure of fusion of the genital "urethral" folds to form the urethra **except Granular hypospadias** dt failure of canalization of the glans.	Failure of the mesoderm to form the Ant. abd. wall & Ant. wall of UB
Types	1) **Ant.** (<u>granular</u> & sub-coronal) → **50 % (M/C)** 2) **Middle** (distal, mid shaft, px. penile) → 20 %. 3) **Post** (peno-scrotal, scrotal & perineal) → 30 %. <u>**Pathology:**</u> • Absent urethra → replaced by fibrous cord. **(chordee)** • Penis cured downwards. • Absent ventral prepuce. **(hooded prepuce)**	**Comlete** • Absent Ant. abd. wall below umbilicus. • Absent Ant. wall UB +Post. wall pushed ant. • Seperation of pubic bones + Waddling gait. • VUR → Asc. Pyelonephritis → MAIN <u>COD</u> **Incomplete** • Pubic bones = united. • Ext. genitalia = normal
C/P & Comp.	1) Abnormal ext. urethral meatus → ventral surface. 2) Abnormal urinary stream. 3) Psychological troubles. 4) <u>***Associated urogenital defects:***</u> • Cryptorchidism / Inguinal hernia / Upper UT defects. *No incontinence or impotence*	**Males** • Epispadius. • upward curv. of penis. • bilat. undescended testes **Females** • Clefted clitoris. • labia minora. • separated ant.
TTT.	<u>**Plastic reconstruction at 6-18 ms**</u> • ***# Circumcision except after surgery.*** (this skin may be used for reconstruction) • **Urinary diversion** for 10 – 15 days post-op. <u>**Techniques > 80:**</u> ✓ **Granular & Coronal** → ***MAGPI.*** *(Meatal Advancement & Glanu-Plasty)* ✓ **Dx. penile** → ***Flip Flap.*** *(Mathieu op.)* ✓ **Px. penile or Peno-scrotal** → ***TPF*** *(Transverse Preputial island Flap)*	<u>**Plastic reconstruction through the MSRE:**</u> 1) **UB + pelvis closure** → at 72 hs from birth. 2) **Epispadius repair** → at 1 yr. like hypos-padius. 3) **BN reconstruction** → at 4 ys *(pt. becomes continent)* 4) **If Complicated** → Urinary diversion by ilela conduit with cystectomy.

CLEFT LIP — CLEFT PALATE

M/C → both together (in 45 %), in males.

	Cleft Lip	Cleft Palate
EMBRY.	**Upper lip** → Failure of fusion bet. maxillary processes & the median fronto-nasal. **Lower lip** → …… of 2 mandibular processes.	Failure of fusion of the 2 maxillary processes together to form the 2ry palate ± the frontonasal process to form the 1ry palate.
INCIDENCE	• 1/ 800 - 1000	• 1/600- 1/800
ETIOLOGY	• Mostly **familial**. • **Others**: Inf., irradiation, Steroids, phenytoin, vit. def.	• ✓ + mainly environmental causes
TYPES	<u>**4 types:**</u> • Unilateral (M/C) Vs. Bilateral • Complete (up to nostril) Vs. Incomplete. • Upper lip Vs. Lower lip. • Simple Vs. alveolar (+ 1ry palate) • Complicated Vs. Uncomp. (2ry palate)	1) Cleft Uvula. 2) Cleft soft palate. 3) Inter-maxillary → both together. 4) <u>**Assoc. 1ry palate:**</u> • Tripartite → both sides. • Bipartite → 1 side. RECENT "ACPA" CLASSIF. 1RY PALATE: • UNI-LATERAL. • BI-LATERAL. 2RY PALATE: • SUB-MUCOUS. • SOFT PALATE. • SOFT & HARD.
CL./P & COMP.	Only disfigurement. (no effect on suckling)	1) **Cosmetic** Disfigurement. 2) Impaired **feeding & suckling.** 3) Repeated **chest infection & chocking**. *(dt VPI velo-ph. Insufficiency)* 4) Chronic **OM** ± **hearing loss**. *(abnormal action of of tensor palate)* 5) **Speech** abnormalities → esp. with the sibilant constants 6) **Orthodontics** & teeth malformation.
TTT	• <u>**Surgical repair at 10 wks / 10 pounds / 10 Hb%**</u> (Minor rule of 10) NB: Cleft alveolus is repaired at 6-7 years! <u>**Lips are sutured in 3 layers.**</u> • **Millard's op.** (Rotational Advancement Flap tech.) • **Tennison's.** (Triangular flap tech.)	1) **Surgical repair** → **at 10 ms / 10 kg.** (major rule of 10) **(LENGENBECK / FU FLOW REPAIR)** 2) **Feeding** → **"HABERMAN FEEDER"** depends on pr. not suckling. 3) **Palatal obturator** → LATHMAN DEVICE.

Burns



	1^{st} DEGREE	2^{nd} DEGREE	3^{rd} DEGREE
Layers	Epidermis only	Epidermis & part of dermis	Reaches ms, bone, etc
Path.	Sunburn or simple erythema.	• Blisters. • Wet Red dt exudation of plasma.	• Eschar. • Dry Brown, yellow. White.
Healing	1 wk.	Superf. partial → 2 wks Deep partial → 4 wks *2^{ry} inf. → dest. Of sweat, sebaceous gl. & hair follicles → turn to 3^{0}*	No healing without a graft or flap.
Pain sens.	Painful	Painful.	PAINLESS.

General Lines of Management

1st Aid

- Move ! pt. away from fire.
- Make ! pt. lie down & ensure **patent airway.**
- Remove all clothes then cover ! pt. with Clean blanket.
- Morphia to ↓ pain.
- Mya (contreversy) → wash under running water. (inf.?)

Hospitalization (ABCDF)

ABCD

- **A = Airway** → ETT *(not tracheostomy dt s.edema)*
- **B = Breathing.**
- **C = Circulation.**
- 3 انابيب
  - a) IV cannula.
  - b) Foley's catheter. (maintain UOP bet. 30-50 ml / hr. to avoid renal shut down)
  - c) NG tube.
- **D = Drugs** (3 أدوية)
  - a) Analgesics. *(delay till the pt. is stabilized)*
  - b) ABS.
  - c) H_2 blockers or Omeprazol.

F = Fluid therapy

Parkland's Formula

4 ml/ kg/ % burnt area of

RINGER's lactate solution?

1/2 dose in 1st 8 hrs.

1/4 dose in 2nd 8 hrs.

1/4 dose in 3rd 8 hrs.

1/2 the original quantity on 2nd day divided twice (1/12s h)

Evan's Formula

Colloid (Plasma or Dextran)

1 ml /kg / % burnt area

+ 2000 ml glucose

Local TTT.

- Conservative **Debridement** .
- **Escharotomy** to releif the ischemia.
- Repeated **Dressing** by Silver Sulpha-diazine (Non-toxic / Non-Allergic / Bactericidal)

	Closed	Opened
Tech.	Occlusive dressing: • *Non-adherent.* • *Cotton absorbent.* • *Crepe bandage.*	*Evap. of fluid* *→ dry crust* *→ epith. below it*
Rate	***every 3 days unless:*** • *Pain, fever.* • *Soaked.*	*3 times / day*
Ind.	• *Hands.* • *Circumf. burns.*	• *Perineum – Face.* • *burns on single surf.*

Long term ttt.

- **3⁰** → Escharectomy + skin flap / graft.
- **1⁰ & 2⁰** → till spont. healing.
- **Prevention of contractures.**

GRAFTS & FLAPS

	GRAFTS	FLAPS
DEF.	**SKIN** TRANSFER (EPIDERMIS + DERMIS) **REMOVED FROM ITS OWN BL. SUPPLY** & TRANSFERRED TO A DISTANT SITE	TISSUE TRANSFER **ATTACHED TO ITS ORIGINAL BL. SUPPLY** BY A PEDICLE FOR NUTRITION.
INDICATIONS	1) Deep burn. 2) Cover large granulating surface. 3) Correction of contraction deformity.	**1)** Any avascular area. (bed sores, irradiations, scarring, bones & tendons…etc) **2)** In wt. bearing are. (eg. Sole) **3)** Re-construction of facial features.
TYPES	**NEXT PAGE PLZ!**	1) ACCORDING TO PROXIMITY. 2) ACCORDING TO CONTENT.

TYPES ACCORDING TO PROXIMITY

1) **LOCAL** → **Sharing 1 border eg.:**
   - Rotational.
   - Z- plasty.
   - V-Y advancement.
2) **REGIONAL** → within the same area but doesn't share a border. eg. crossed finger. (in the same limb)
3) **DISTANT** → kept attached for 3 wks till vascularization then division, eg. Cross leg.
4) **FREE FLAP** → anastomose the vs. by **μ-surgery** technique.

TYPES ACCORDING TO CONTENT

1) **CUTANEOUS** → Skin ONLY.
2) **FASCIO-CUTANEOUS** → Skin + deep fascia → **Bed sores. Pilon-adal sinus.**
3) **MYO-CUTANEOUS** → ms + skin → **Breast re-construction.**
   - LATISMUS DORSI / SERRATUS ANT.
   - TRAM FLAP (Transv. Rectus Abdominus MCP)
4) **OSTEO-CUTANEOUS** → (+ bone)
   - A) **Rib** for mandible reconstruction after **Commando op.**
   - B) **FIBULA** after wide local excision of **maliq. bone tumor.**

Types of Grafts

	Partial Thickness / Split / Thiersch Graft	Full Thickness / Wolfe Grafts
Composition	• Epidermis ± Superf. part of dermis.	• Epidermis **&** dermis.
Donor site	• Ant. Surface of thigh or forearm.	• Post auricular skin.
Recipient site	• Extensive skin loss.	• Face, palm. (but not the sole)
How to obtain?	• **Humby's knife or Dermatome.**	• Scalpel.
Advantages	1) Good take & vascularization. (thin) 2) **Donor's** area heals **Spontaneously**. 3) **Allow expansion** by Meshing → used in large raw areas.	عكس عيوب الـ Partial
Disadv.	1) **Pigmentation** → not suitable in face. 2) **Less durable** → not suitable for pr. areas. (palm & sole) 3) 2^{ry} contracture. 4) Poor sensation & Cosmosis. (no nerves)	عكس مزايا الـ Partial **Donor's area requires Thiersch graft?!**
Indications	**Extensive skin loss.**	1) **Facial wounds.** 2) **Palmar aspect of hands.**

Phases of Graft survival:

- **1-2 days** → Diffusion.
- **3-5 days** → Inosculations.
- **>5 days** → Vascularization.